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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,970	04/27/2007	Olivier Fauqueux	294344US2X PCT	7116

22850 7590 02/17/2011  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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BEHNCKE, CHRISTINE M

ART UNIT	PAPER NUMBER
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3661

NOTIFICATION DATE	DELIVERY MODE
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02/17/2011

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/587,970	<b>Applicant(s)</b> FAUQUEUX ET AL.	
	<b>Examiner</b> CHRISTINE BEHNCKE	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11, 12, 14-16 and 19-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 11, 12, 16, 21 and 23 is/are rejected.
- 7) ☐ Claim(s) 14, 15, 19, 20, 22, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is in response to the Amendment and Remarks filed 12/08/2010, in which claims 11, 12, 14-16, and 19-25 were presented for examination.

#### ***Response to Arguments***

Applicant's arguments with respect to the newly amended portions of claims 11 and 16 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11, 12, 16, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishizaki, US 2004/0140148.

(Claim 11) Nishizaki describes a method of assisting steering of steered wheels of a vehicle, comprising: calculating an angular speed ([0040] output of 1211b, steering angular velocity) and an angular acceleration of a steering wheel of the vehicle ([0053] output of 1211a steering angular acceleration); applying a phase advance between the steering wheel and a rack element so as to decrease response time of the vehicle to an action of a driver of the vehicle on the steering wheel ([0034], [0005] and [0015]). Nishizaki does not expressly describe comparing the steering angular speed and steering angular acceleration to thresholds. Nishizaki describes applying the phase advance, inertia compensation, when the steering torque is greater than a threshold torque, above the assist table dead zone [0041]. Nishizaki further teaches that it was well known in the art at the time of the invention for the steering angular acceleration to

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be used instead of torque to determine the inertia compensation ([0053]). It would have been obvious to one of ordinary skill in the art at the time of the invention to compare the steering angular acceleration value and the steering angular velocity to assist table dead zone thresholds, to efficiently output either zero assist or preset constant assist at low speeds, and to generate proper steerage assisting power in view of the assist design constraints.

(Claim 12) Nishizaki further describes wherein a steered wheels steering preset is emitted to an actuator to control the rack element (), the steering present being calculated as a function of the angular speed and the angular acceleration of the steering wheel ([0035]-[0036]).

(Claim 16) Nishizaki describes a system for assisting steering of steered wheels of a vehicle, comprising: a sensor to measure an angular speed and an angular acceleration of a steering wheel of the vehicle ([0053]); and a control unit applies a phase advance between the steering wheel and a rack element so as to decrease response time of the vehicle to an action of a driver of the vehicle on the steering wheel (ECU 5, [0034], [0005], and [0015]). Nishizaki does not expressly describe the control unit comparing the steering angular speed and steering angular acceleration to thresholds. Nishizaki describes applying the phase advance, inertia compensation, when the steering torque is greater than a threshold torque, above the assist table dead zone [0041]. Nishizaki further teaches that it was well known in the art at the time of the invention for the steering angular acceleration to be used instead of torque to determine the inertia compensation ([0053]). It would have been obvious to one of ordinary skill in

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the art at the time of the invention to compare the steering angular acceleration value and the steering angular velocity to assist table dead zone thresholds, to efficiently output either zero assist or preset constant assist at low speeds, and to generate proper steerage assisting power in view of the assist design constraints.

(Claims 21 and 23) Nishizaki expressly teaches applying a phase advance equal to zero when the steering torque of the steering wheel is less than the threshold speed (within a predetermined range near 0, near the assist dead zone). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply zero phase advance when the steering angular velocity and steering angular acceleration were near zero, within the assist table dead zone region to prevent erroneous and undesired assist.

### ***Allowable Subject Matter***

Claims 14, 15, 19, 20, 22, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE BEHNCKE whose telephone number is (571) 272-8103. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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CMB

/Thomas G. Black/  
Supervisory Patent Examiner, Art Unit 3661